Infrastructure Interdependencies Tabletop Exercise: Summary of Key Issues and Actions to Date

BLACK ICE

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May 2001

Report Documentation Page

Report Date	Report Type	Dates Covered (from... to)
02May2001	N/A	-

Title and Subtitle	Contract Number
Infrastructure Interdependencies Tabletop Exercise: Summary of Key Issues and Actions to Date	
	Grant Number
	Program Element Number

Author(s)	Project Number
Scalingi, Paula	
	Task Number
	Work Unit Number

Performing Organization Name(s) and Address(es)	Performing Organization Report Number
DOE Office of Critical Infrastructure Protection	

Sponsoring/Monitoring Agency Name(s) and Address(es)	Sponsor/Monitor's Acronym(s)
NDIA (National Defense Industrial Association) 211 Wilson Blvd, STE. 400 Arlington, VA 22201-3061	
	Sponsor/Monitor's Report Number(s)

Distribution/Availability Statement
Approved for public release, distribution unlimited

Supplementary Notes
Proceedings from the Weapons of Mass Destruction (WMD) Terrorism Preparedness & Response Conference & Exhibition, 30 April - 2 May 2001 Sponsored by NDIA

Abstract

Subject Terms

Report Classification	Classification of this page
unclassified	unclassified

Classification of Abstract	Limitation of Abstract
unclassified	UU

Number of Pages
19

BLACK ICE Exercise Summary

- **Background**

  – Key awareness-building mechanism for Regional CIP Preparedness Program/ Implementation Plan

  – Focused on Salt Lake City 2002 Winter Olympics

  – Co-sponsored by the Utah Department of Public Safety's Division of Comprehensive Emergency Management, the U.S. Department of Energy's Office of Critical Infrastructure Protection, and the Utah Olympic Public Safety Command

  – Collaborative effort by regional gas, electric, telecommunication companies; other stakeholders

  – Means to develop prioritized mitigation measures (Action Plan)

- **Participation**

  – Approximately 225 players and observers participated (auditorium was filled to capacity!)

BLACK ICE Exercise Summary (Cont'd)

- **Participation (cont'd)**
  - More than 65 organizations were represented
    - ∗ Public and private-sector infrastructure service providers
    - ∗ Emergency management, medical, mass care, and law enforcement personnel
    - ∗ Local, county, state, federal, and Olympic officials
  - Players were actively engaged—comments were candid and forthcoming

- **Initial feedback on exercise**
  - Inspired stakeholder optimism, generated enthusiasm, and facilitated networking
  - Increased awareness of infrastructure vulnerabilities and interdependencies
  - Identified important infrastructure service restoration challenges and issues

BLACK ICE Exercise Summary (Cont'd)

- **Initial feedback (cont'd)**

  – Surfaced issues regarding roles, responsibilities, and authorities for responding to and recovering from infrastructure disruptions

  – Provided a catalyst for moving forward on an action plan

  – Focused attention on what needs to be done to develop a "disaster resistant Olympics"

BLACK ICE

Infrastructure Interdependencies
Tabletop Exercise

Achieving a "Disaster Resistant Olympics" Requires Tackling Key Issues

- **Interdependencies**

- **Coordination**

- **Communications**

- **Resource Allocation**

Interdependencies Issues

- **Need to better understand what interdependencies really are, and their importance to the operation of the infrastructures**

  – Normal operations

  – Disruptions

  – Repair and restoration (for example, implications of increased outage duration times)

- **Need to expand dialog and close interaction among infrastructure service providers about their interdependencies**

- **Need to understand the dependence of community and venue facilities on the interdependent infrastructures**

- **Need to identify and understand Supervisory Control and Data Acquisition (SCADA) system vulnerabilities and interdependencies**

Coordination Issues

- **Need to ensure close and continuing coordination (local, county, state, federal, private, Olympic)**

- **Need to establish procedures for coordinating and communicating disruption information (extent and duration)**

- **Need to harmonize conflicting emergency response procedures among stakeholder plans**

- **Need to establish procedures for coordinating and prioritizing service restoration**

- **Need to determine "who's in charge" as problems worsen and situations change**

- **Need to coordinate public and media relations ("speak with one voice")**

Communications Issues

- **Need to ensure that there is an effective regional communications mechanism among all stakeholders**

- **Need to identify and test primary and backup communication systems for normal operation, disruption, and restoration situations**

- **Need to develop plans to effectively work around system overloads (congestion) and disruptions**

  - Public switched networks

  - Cell networks

  - Private and government communication networks

- **Need to establish procedures for user access priorities during disruption and restoration situations**

Resource Allocation Issues

- **Need to coordinate staffing for Olympic operations and emergency response**

- **Need to identify how to establish priorities and allocate resources during infrastructure disruptions**

- **Need to identify the logistical difficulties of getting the "right people" to the "right locations" during infrastructure disruptions (for example, repair crews to sites, personnel to emergency operations centers)**

Development of Action Plan

- **Task groups established to recommend actions to address shortfalls in all four areas**

- **Task groups comprised of volunteer stakeholders**

- **Recommendations integrated into Action Plan**

- **Task and Milestone schedule developed (May '01) to cover nine months leading to Olympics**

Action Plan

Objectives:

- **Achieve, to the greatest extent possible given time and resource constraints, the goal of a "disaster resistant Olympics"**

- **Move forward with the Critical Infrastructure Protection Implementation Plan***

- **Address issues identified, and build on insights gained, during BLACK ICE Exercise**

*Critical Infrastructure Protection Implementation Plan for 2002 Winter Olympic Games, August 14, 2000

Action Plan
Interdependencies—Actions to Date

- **Conducting vulnerability assessments and analyzing interdependencies** *(What are they? What do they impact? What are the consequences?)*

  - Selected physical and cyber vulnerability assessments under way

  - Identifying and analyzing infrastructure interdependencies (template developed)

  - Assessing options for data bases, stakeholders access to information

  - Evaluating protection and mitigation measures for implementation

- **Identifying critical community and venue facilities and their dependencies on infrastructures**

  - Development and application of guidelines and criteria for identifying critical facilities

  - Evaluating protection and mitigation measures for implementation

- **Planning follow-on interdependencies exercises—"Black Ice II"**

  - Focus on key utilities

  - More detailed analysis

Action Plan
Coordination—Actions to Date

- **Reviewing existing emergency operations plans—state, county, and city**

  - Have identified shortfalls relative to critical infrastructure protection needs

  - Developing strategies to address shortfalls; harmonizing plans

- **Addressing disruption protocols**

  - Procedures for coordinating and communicating disruption information

  - Procedures for coordinating and prioritizing service restoration

  - A command and control "roadmap" (for identifying "who's in charge" as problems worsen and situations change)

  - Strategy to coordinate public and media relations ("speak with one voice")

- **Addressing recovery protocols**

Action Plan
Communications—Actions to Date

- **Identifying stakeholder requirements, enhancing plans**

- **Identifying and testing primary and backup communication systems for normal operation, disruption, and restoration situations**

- **Developing plans to work around system overloads (congestion) and disruptions effectively**

- **Establishing procedures for user access priorities during disruption and restoration situations**

BLACK ICE

Infrastructure Interdependencies
Tabletop Exercise

Action Plan
Resource Allocation—Actions to Date

- **Developing mechanisms for coordinating staffing for Olympic operations and emergency response**

- **Defining procedures to establish priorities and allocate resources during infrastructure disruptions**

- **Developing procedures for getting the "right people" to the "right locations" during infrastructure disruptions**

Action Plan—Next Steps

- **Work underway, but much remains to be done**

- **Lead and support organizations still need to be identified for certain activities**

- **Stakeholders must commit to meet schedules, milestones, and deliverables**

- **Need to identify sources of funding and expertise**

- **Post Olympics follow-on activities need to be incorporated into a longer-term implementation plan to help achieve goal of a "Disaster Resistant Utah"**

Regional Infrastructure Assurance
--How to Create a "Disaster Resistant" State or Region

- **Establish stakeholder group; if possible, expand existing coordination mechanism**
  - **Should include all infrastructures, federal, state, local (e.g., police, fire) government, communities**

- **Exchange general information (hold briefings) on infrastructure operations, interdependencies, response/recovery plans**

- **Develop a regional infrastructure assurance implementation plan that includes:**
  - **An inventory of existing information and capabilities**
  - **A threat analysis**
  - **Infrastructure vulnerability assessments (physical, cyber, interdependencies)**

Regional Infrastructure Assurance
--How to Create a "Disaster Resistant" State or Region (Cont'd)

Infrastructure Interdependencies
Tabletop Exercise

- – Community vulnerability assessments

- – Enhancement of response/recovery plans

- – Training and exercises

- – Identification of necessary databases, analytic tools, equipment

- – Resources needed, and source of resources

- Hold infrastructure interdependency exercises to help develop the implementation plan, to identify key shortfalls, or to test protection, mitigation and response enhancements

- Develop a task and milestone schedule

- Identify "champions" for each task

- Get expert help as necessary

Regional Infrastructure Assurance
--How to Create a "Disaster Resistant" State or Region (Cont'd)

- Seek and share information with other regions of the country

- Stakeholder group should monitor progress – it is THEIR plan

- Keep the implementation plan flexible and updated